2.

A) Fred’s Hardware and Hobby House expects its sales to increase at a constant rate of 8 percents per year over the next three years. Currents sales are $100,000. Forecast sales for each of the next years.

B) If sales in 2004 were $60,000 and they grew to $100,000 by 2008 (a four year period), what was the actual annual compound growth rate?

6. The economic analysis division of Mapco Enterprises estimated the demand functions for its line of weed trimmers as:

 Q­D= 18,000 + 0.4N – 350PM + 90PS

Where N = number of new homes completed in the primary market area.

 PM = price of the Mapco trimmer

 PS = price of it competitor’s Surefire trimmer

In 2006 15,000 new homes are expected to be completed in the primary market area. Mapco plans to charge $50 for its trimmer. The Surefire trimmer is expected to sell for $55.

1. What sales are forecast for 2006 under these conditions?
2. If its competitor cuts the price of the Surefire trimmer to $50, what effect will it have on Mapco’s sales?
3. What effect would a 30 percent reduction in the number of new homes completed have on Mapco’s sales (ignore the impact of the price cut of the Surefire trimmer)?

9. Bell Greenhouses estimated its monthly demand for potting soil to be the following:

 N= 400+4X

Where N=monthly demand for bags of potting soil

 X= time periods in months (March 2004=0)

Assume this trend factor is expected to remain stable in the foreseeable future. The following table contains the monthly seasonal adjustments factors, which have been estimated using actual sales data from the past five years:

 Month Adjustment Factor

 March +2%

 June +15%

 August +10%

 December -12%

1. Forecast Bell Greenhouses demand for potting soil in March, June, August, and December 2005.
2. If the following table shows the forecasted and actual potting soil sales by Bell Greenhouses for April in five different years, determine the seasonal adjustment factor to be used in making an April 2006 forecast

Year Forecast Actual

2005 500 515

2004 452 438

2003 404 420

2002 356 380

2001 308 320